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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/612,948

07/07/2003

Alon Adam

211-2US

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07/14/2006

JACK PAAVILA

BOX 1151

ALEXANDRIA, KOC IA0

CANADA

EXAMINER

KYLE, MICHAEL J

ART UNIT

PAPER NUMBER

3677

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,948

Applicant(s)

ADAM ET AL.

Examiner

Michael J. Kyle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-17 is/are pending in the application.
- 4a) Of the above claim(s) 8,13,16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,7,9-12,14,15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6, 7, 9-12, 14, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Each of these claims provides for a “single bearing unit”. It is unclear what elements comprise a “single bearing unit”, as this term is not provided for in the specification, nor is any further description, aside from mention by name alone, provided in the claims. It appears as though there are multiple bearing units, as this bearing has multiple balls, and upper and lower elements. As best understood, a single bearing unit is a plurality of objects the act together as a single bearing.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 7, 9-12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (U.S. Patent No. 652,128) in view of Warnock (U.S. Patent No. 1,421,626). With respect to independent claim 11, Martin discloses a swivel caster having a bottom caster member (g) with a cylindrical stub shaft (h) extend toward a top member (a). The top member includes a

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cylindrical bore (portion receiving h) and a cylindrical counterbore (portion receiving l) concentric about the bore. Martin further discloses a first bearing means (l) comprising a single bearing unit mounted in the counterbore. This bearing transfers load from the top member to the bottom member. A second bearing means (c) comprising a ring of loose balls is mounted in the bore. Martin fails to disclose the second bearing means to be mounted in an annular raceway half formed in the cylindrical wall of the bore.

5. Warnock teaches a swivel caster assembly comprising a top member (5) and bottom member (6). A second bearing means (10) comprising a plurality of loose balls is mounted in an annular raceway, where half of the raceway is formed in cylindrical wall of a bore, in the top member (see figures 2 and 5). The other half of the raceway is formed in a stub shaft (on 6). Warnock uses this arrangement to receive side thrusts and facilitate swiveling of the caster (page 1, lines 60-63). The bearings also retain the stub shaft within the bore. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Martin as taught by Warnock, such that Martin's second bearing means (c) are mounted in an annular raceway, half of which is formed in the bore, to receive side thrusts.

6. With respect to claim 12, Martin discloses the counterbore in the top member forms an annular chamber about the stub shaft with the single bearing unit (l) press fit mounted within the counterbore. The raceway, as modified by the teachings of Warnock, is formed in the cylindrical wall of the bore and the cylindrical wall of the stud shaft. Examiner notes the limitation "press fit mounted" is a method limitation is an article claim (product-by-process). As long as the prior art is capable of being produced by such a method, and meets all of the structural limitations of the claim, the prior art is considered to meet the method limitation.

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7. With respect to claims 6 and 7, Martin discloses the single bearing unit to be a thrust bearing.

8. With respect to claim 14, Martin discloses a swivel caster having a bottom caster member (g) with a cylindrical stub shaft (h) extend toward a top member (a). The top member includes a cylindrical bore (portion receiving h) and a cylindrical counterbore (portion receiving l) concentric about the bore. Martin further discloses a first bearing means (l) comprising a single bearing unit mounted in the counterbore. This bearing transfers load from the top member to the bottom member. A second bearing means (c) comprising a ring of loose balls is mounted in the bore. The stub shaft is retained in the bore to connect the top and bottom members together. Martin fails to disclose the second bearing means to be mounted in an annular raceway half formed in the cylindrical wall of the bore. The arrangement disclosed by Martin is opposite of the arrangement claimed, i.e., in Martin the stub shaft extends from the bottom member, not the top member.

9. The claimed arrangement of the elements in claim 14 appears to be exactly reverse that of claim 11, and of also of that shown by Martin. This arrangement amounts to nothing more than a reversal of parts, and is considered obvious to one of ordinary skill in the art, as such a modification fails to bring about a new or unexpected result. It would have been obvious to one having ordinary skill in the art at the time of the invention, to reverse the arrangement of Martin such that the stub shaft extends from the top member and the bore and counterbore are formed in the bottom member, to receive the stub shaft and first and second bearing means.

10. Warnock teaches a swivel caster assembly comprising a top member (5) and bottom member (6). A second bearing means (10) comprising a plurality of loose balls is mounted in an

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annular raceway, where half of the raceway is formed in cylindrical wall of a bore, in the top member (see figures 2 and 5). The other half of the raceway is formed in a stub shaft (on 6).

The bearings also retain the stub shaft within the bore. Warnock uses this arrangement to receive side thrusts and facilitate swiveling of the caster (page 1, lines 60-63). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Martin as taught by Warnock, such that Martin's second bearing means (c) are mounted in an annular raceway, half of which is formed in the bore, to receive side thrusts.

11. With respect to claim 15, Martin, as modified, discloses the counterbore in the bottom member forms an annular chamber about the stub shaft with the single bearing unit press fit mounted within the counterbore. The raceway, as modified by the teachings of Warnock, is formed in the cylindrical wall of the bore and the cylindrical wall of the stud shaft. Examiner notes the limitation "press fit mounted" is a method limitation is an article claim (product-by-process). As long as the prior art is capable of being produced by such a method, and meets all of the structural limitations of the claim, the prior art is considered to meet the method limitation.

12. With respect to claims 9 and 10, Martin discloses the single bearing unit to be a thrust bearing.

Response to Arguments

13. Applicant's arguments filed May 1, 2006 have been fully considered but they are not persuasive. Applicant argues that Martin does not have a stub shaft, and provides further limitations defining a stub shaft in the arguments. However, none of these limitations that

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further define the stub shaft are found in claims, and in this sense, the arguments are narrower the claims. Martin meets every claimed limitation of the stub shaft.

14. Applicant argues that there is no sole or single bearing unit in Martin, and that each bearing comprises a plurality of individual balls. Examiner respectfully disagrees. It is noted that applicant's single bearing means appear to include a plurality of balls along with further structure. Inasmuch as applicant's plurality of balls and additional structure forms a single bearing unit, the plurality of balls in Martin are considered to form a single bearing unit. It is further noted that the claims do not recite any limitations that would preclude a prior art kingpin arrangement from reading on the claims.

15. Applicant argues that modifying Martin as taught by Warnock is not obvious in that a raceway along a vertical line is not necessary in Martin. Examiner respectfully disagrees, and notes such an arrangement can effectively receive side thrusts. Applicant further argues there is no need to provide a side thrust bearing in Martin, as a king pin like structure exists. Examiner respectfully disagrees, and notes the alleged king pin like structure in Martin comprise an inner member extending upward completely within outer member. A thrust bearing would be beneficial to act between these two elements in the case of an excessive side thrust to the assembly.

16. With respect to applicant's argument regarding the term "press fit" as being a structural limitation, examiner respectfully disagrees. Examiner recognizes that a press fit results in a frictional engagement as applicant argues. However, the term press fit refers to the process of pressing an element into place to obtain the frictional engagement. Absent any claimed structure associated with a press fit, the term remains treated as a process step in an article claim. In

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Martin, the bearings are pressed between the inner and outer elements. This meets the claim limitation.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

18. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

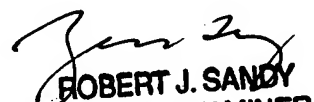
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Kyle whose telephone number is 571-272-7057. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mk


ROBERT J. SANDY
PRIMARY EXAMINER